Kirkwood, J. E. 1907. Some features of pollen formation in the Cucurbitaceae. Bull. Torrey Bot. Club 34: 221–242.
McKay, J. W. 1931. Chromosome studies in the Cucurbitaceae. Univ. Calif. Publ. Bot. 16:339–350.
Nakajima, G. 1937. Cytological studies in some dioecious plants. Cytologia, Fujii Jub. Vol. 282–292.

IRA WADDELL CLOKEY

The death of Ira Waddell Clokey at his home in South Pasadena, California, on January 13, 1950, marks the passing of a man whose career was extraordinarily useful to the science of botany even though botany was but an avocation with him. Born at Decatur, Illinois, on December 21, 1878, Ira Clokey was the son of Josiah Mitchell Clokey and Susan Carrie Elson. He attended the University of Illinois and Harvard University, receiving from the latter in 1903 the degree of Bachelor of Science *cum laude* with a major in mining engineering, a profession which he followed until 1920, when he entered Iowa State University to specialize in botany. He received the degree of Master of Science in Plant Pathology from this institution in 1921.

As a boy, Ira Clokey showed an avid interest in botany and this interest remained with him as long as he lived. In Decatur High School, one of his classmates was H. A. Gleason, and together they went on many a trip to collect and study the flora of Illinois. His career as a mining engineer took him in 1904 to Mexico, where he remained for seven years, and in 1915 to Colorado. In both regions he collected extensively, and built up a herbarium containing an excellent representation of the plants of each area. Unfortunately, in 1912, his herbarium, containing all of his Mexican collections and some of his early Illinois material was destroyed by fire. The fact that the duplicates of his Mexican collections had never been distributed, is a great loss to science. His later collecting was pursued with a view to rebuilding his herbarium through exchange. With this end in mind, he collected many duplicates, and as a result, there are few herbaria in the world that do not have representatives of his collections. Despite his having collected in large quantities, his specimens were beautifully prepared.

Mr. Clokey's early interest in botany centered around the genus *Carex* and he carried on extensive correspondence and exchange with several of the caricologists of the early part of the current century. As a result of these early exchanges, much of the classical material of the genus *Carex* is in his herbarium.

In 1935 Mr. Clokey became interested in the flora of the mountains of the southwestern United States and selected the Charleston Mountains of southern Nevada for intensive study. Here he collected large sets and it may be said that through his

efforts, the flora of the Charleston Mountains in Nevada is perhaps more completely represented in major herbaria than is the flora of any equal area of the world. Through the cooperation of the Civilian Conservation Corps, many of these specimens were collected in sets of 100 to 150. All of these were distributed, some of them as Gray Herbarium Exsiccatae No. VIII. His intensive field work in the Charleston Mountains covered a period of approximately seven years. To work up this material, Mr. Clokey enlisted the aid of many specialists who treated the families and genera of their special interest, but as may be noted in the appended bibliography, he himself published several papers treating special groups in this area. The manuscript for the "Flora of the Charleston Mountains" was completed and accepted for publication by the University of California Press just prior to Mr. Clokey's death.

As recreation from his studies on the Charleston Mountain flora, Mr. Clokey engaged in researches on the genetics of maize, the work being carried on largely in collaboration with Dr. E. G. Anderson of the California Institute of Technology. This seeming divergence may be accounted for by the fact that while he was at Iowa State University he had developed considerable interest in the field of genetics under the influence of the late E. W. Lindstrom.

No one as whole-heartedly interested in botany as was Ira Clokey could have been satisfied without building up a sizeable botanical library. He expended considerable time and energy in obtaining complete sets of botanical journals and was jubilant when a missing number was finally acquired and the series in question thus made complete. In addition to the journals and many miscellaneous and indispensable references, his library contained the majority of the floras treating various parts of the United States. The California Institute of Technology at Pasadena is indeed fortunate in having this collection presented to it as the Ira W. Clokey Memorial Library.

In 1941, Mr. and Mrs. Clokey deposited the Clokey Herbarium at the Universiy of California with the understanding that it become the property of the University at Mr. Clokey's death. From that time until the present, most of the Clokey Herbarium exchange has been carried on through the Herbarium of the University of California. Containing an estimated 102,600 specimens, the Clokey Herbarium constitutes the largest single collection ever received by the Herbarium of the University of California. It exceeds in size the Brandegee Herbarium which might be said to be the nucleus of the University of California herbarium.

To Mr. Clokey, botany was always a source of happiness which he pursued with vigor. He was a cheerful, intense man with a keen sense of humor. I shall never forget his amusement

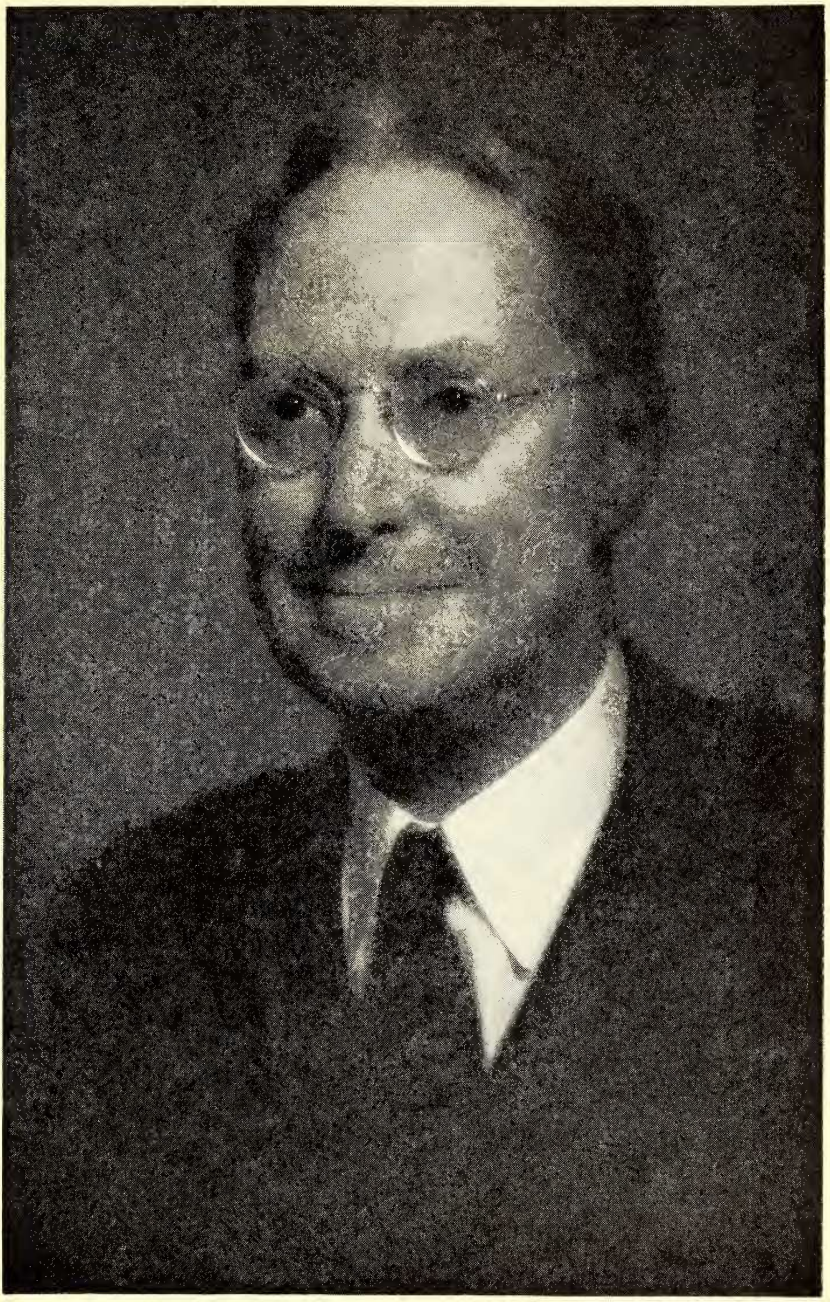

PLATE 13. IRA WADDELL CLOKEY.

over having sent fourteen specimens of a very complex species to a specialist and having them returned to him under fifteen different names. I believe he doubtfully accepted three entities as involving the fifteen names. He retold this story many times, always closing it with rollicking laughter.

Mr. Clokey is survived by his widow, Mrs. Cleora Brooks Clokey, who accompanied him on many of his collecting expeditions and who often assisted him with the preparation of specimens, and by two daughters.—Herbert L. Mason, Department of Botany, University of California, Berkeley.

Bibliography of I. W. Clokey's Botanical Publications

1916. A new hybrid Carex from the middle western states. Torreya 16: 219–220.
1919. Carex notes. Rhodora 21: 83–85.
1922. Carex notes. Carex apoda sp. nov. Am. Jour. Sci. 3: 88–91. 1 plate.
1931. Notes on the flora of Santa Cruz Islands, California. Bull. So. Calif. Acad. Sci. 30: 60–61.
1934. (and E. G. Anderson) Chromosomes involved in a series of interchanges in maize. Am. Midland Nat. 68: 440–445.
1937. A new Penstemon from the Charleston Mountains, Nevada. Madroño 4: 128–130. [Notes on the flora of the Charleston Mountains, Clark County, Nevada. I.]
1938. Notes on the flora of the Charleston Mountains, Clark County, Nevada. [II.] Bull. So. Calif. Acad. Sci. 37: 1–11. 2 plates.
1939. Notes on the flora of the Charleston Mountains, Clark County, Nevada. III. Bull. So. Calif. Acad. Sci. 38: 1–7.
1939. (and D. D. Keck) Reconsideration of certain members of Penstemon subsection Spectabiles. Bull. So. Calif. Acad. Sci. 38: 8–13.
1942. Notes on the flora of the Charleston Mountains, Clark County, Nevada. IV. Astragalus. Madroño 6: 211–222. 1 plate.
1943. Notes on the flora of the Charleston Mountains, Clark County, Nevada. V. Cactaceae. Madroño 7: 67–76. 2 plates.
1945. Notes on the flora of the Charleston Mountains, Clark County, Nevada. VI. Madroño 8: 56–61.
——. In press. Flora of the Charleston Mountains, Nevada.

A GRAPHIC REPRESENTATION OF BESSEY'S TAXONOMIC SYSTEM

R. Lucas Rodriguez C.

The present diagram (fig. 1) is an effort to show Bessey's (1915) orders of Angiosperms and their relationships, with reference to the main characteristics which distinguish them and which are held to indicate their degree of primitiveness or advancement.

Studying Bessey's system one comes into acquaintance with his chart (fig. 2) in which he showed the relationship of the orders and, approximately, the number of species in each. When lines are drawn on this familiar "cactus plant" diagram to separate one characteristic from its opposite, they interweave, necessarily, in irregular fashion.